

TRANSLATION

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P803410/WO/1	FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No. PCT/EP2004/010282	International filing date (day/month/year) 15.09.2004	Priority date (day/month/year) 13.10.2003	
International Patent Classification (IPC) or national classification and IPC F01D11/12, F01D11/22			
Applicant DAIMLERCHRYSLER AG			

<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>

<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/010282

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:

 - international search (Rule 12.3 and 23.1(b))
 - publication of the international application (Rule 12.4)
 - international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the **elements** of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

the international application as originally filed/furnished

the description:

pages 1-12 as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

the claims:

nos. 1-5 as originally filed/furnished

nos.* _____ as amended (together with any statement) under Article 19

nos.* _____ received by this Authority on _____

nos.* _____ received by this Authority on _____

the drawings:

sheets 1/1 as originally filed/furnished

sheets* _____ received by this Authority on _____

sheets* _____ received by this Authority on _____

a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. The amendments have resulted in the cancellation of:

the description, pages _____

the claims, nos. _____

the drawings, sheets/figs _____

the sequence listing (*specify*): _____

any table(s) related to sequence listing (*specify*): _____
4. This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

the description, pages _____

the claims, nos. _____

the drawings, sheets/figs _____

the sequence listing (*specify*): _____

any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/EP2004/010282Box No. V **Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	1–5	YES
	Claims		NO
Inventive step (IS)	Claims	1–5	YES
	Claims		NO
Industrial applicability (IA)	Claims	1–5	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

1 This report makes reference to the following document:

D1: US 5 785 493 A (OJIMA KAZUO ET AL) 28 July 1998 (1998-07-28)

2 Document D1 is considered the closest prior art and discloses (the references between parentheses refer to that document; see the drawings):

a turbo-machine having a stator with an internal intake coating (5) and a rotor (3) inside the stator,

from which the subject matter of independent claim 1 differs in that:

the turbo-machine also has a device for the parallel displacement and rotation of the axis of rotation of the rotor about the axis of symmetry of the stator.

2.1 The subject matter of claim 1 is thus novel (PCT

Box No. V **Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

Article 33 (2) .

The current invention can therefore be considered to address the problem of "developing a turbo-machine in which the size of the gap between the stator and the rotor is minimised".

2.2 The solution to this problem as proposed in claim 1 of the present application involves an inventive step (PCT Article 33(3)) for the following reasons:

the wear caused to the intake coating by the rotor blades is virtually uniform. This has the advantage that the rotor blades transfer less torque to the stator, resulting in less bending and compression of the rotor.

2.3 Claims 2 and 3 are dependent on claim 1 and therefore likewise meet the PCT requirements for novelty and inventive step.

3 Document D1 is considered the closest prior art and discloses (the references between parentheses refer to that document; see column 3, lines 29 and 30):

a method for adjusting the stator and rotor of a turbo-machine, in which an intake coating is applied to the stator, said intake coating being at least partly worn away by the rotor.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/EP2004/010282

Box No. V **Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

The subject matter of independent claim 4 differs therefrom in that:

the rotor rotates about an axis of rotation which rotates in parallel displacement about the axis of symmetry of the stator.

3.1 The subject matter of claim 4 is thus novel (PCT Article 33(2)).

The current invention can therefore be considered to address the problem of "developing a method for adjusting the stator and rotor of a turbo-machine, the size of the gap between the stator and the rotor being minimised".

3.2 The solution to this problem as proposed in claim 4 of the present application involves an inventive step (PCT Article 33(3)) for the same reasons as those provided in point 2.2 of this report.

3.3 Claim 5 is dependent on claim 4 and therefore likewise meets the PCT requirements for novelty and inventive step.